A Review of the Butterflies in the Bristol Area

By A. D. R. Brown, F.R.E.S.

Introduction

Over the past ten years, much information has been collected about the local lepidoptera of the Bristol area, and especially the butterflies. The Entomological Section of the Bristol Naturalists' Society has been largely responsible for this, and every year members of the Society have been kind enough to send in observations of what they have seen, both privately and on organised field meetings.

It has been the custom of the Entomological Section to preserve these observations by recording them on index cards, and a report has been published annually in the Society's "Proceedings" giving details of the features of that particular year. Since this system was initiated many changes have taken place as a result of 'progress' altering the balance of flora and fauna in this area, and this has been especially noticeable with our lepidoptera. When Monks Wood had established its national lepidoptera mapping scheme, members of our Section formed a committee to co-operate with this scheme on a more local basis. We decided to concentrate on vice-counties West Gloucestershire and North Somerset, and in 1969 we published our first set of distribution maps in the Bristol Naturalists' Society's "Proceedings" together with the usual annual report.

This article is just a general survey of the various species of butterfly taken from our extensive records, and an attempt has been made by the author to give some idea of the situation in this part of the world, together with notes on the destruction of habitats, local variation and various other points. A series of distribution maps covering the two vice-counties in question has been included, and these are identical with the ones that we have previously published.

Owing to the shortage of entomologists in the Bristol area, it is not possible to cover the entire region from one year to the next, so, as can be expected, there will be many gaps in our knowledge of the precise locations and distributions of many of the species. However, where there is a certain lack of information, this has been mentioned while describing the species in question, and suggestions are made of likely haunts which need to be studied.

It is hoped that some benefit may be gained from this report, and that it may throw some light on the lepidoptera situation as a whole in this country.

DANAIDAE

Danaus plexippus Linn. (Milkweed)

During the great invasion of this North American migrant butterfly to this country in the autumn of 1968, two of them, out of total of over sixty, were observed in the Bristol area, one

from each vice-county. On the 14th October of that year, one was seen on the wing at Brent Knoll between Weston-super-Mare and Bridgewater, while a second was noted twelve days later at Churchdown in Gloucestershire.

SATYRIDAE

Pararge aegeria Linn. (Speckled Wood)

The Speckled Wood occurs in almost any suitable habitat in the Bristol area, but is never common. However, in certain isolated localities in the Cotswold and Mendip Hills, it has been observed in strength from time to time, mainly on the early summer bramble blossom. We usually see four broods every year, there being two parts to each generation. The first specimens appear on the wing in April and are of a particularly bright and even exotic character, with very prominent yellow markings. In the spring of 1967, the author captured two contrasting aberrations at one locality on the same day. They were both females, and had emerged during a warm sunny spell following a period of heavy frosts and bitter cold. With the first specimen, the characteristic yellow patch surrounding the eye-spots on the forewings was absent, whereas on the second one most of the yellow markings on the forewings had been extended into broad streaks, and the eye-spots themselves were enlarged. It is thought that the prevailing weather could have been responsible for these variations.

During the latter part of the year, specimens are seen on the wing right up to the end of October.

Pararge megera Linn. (Wall Brown)

Over the whole of the two vice-counties, this species has been seen at sometime or another, but only in very small numbers. Its strength varies from one season to the next, and occasionally it may be absent from certain popular haunts for quite a number of years. Unfortunately, it is extremely difficult to give any indication of the trends of this species, but in one or two localities its status never dwindles. These places are mainly in the open areas along the Cotswold escarpment in Gloucestershire, and Sand Point near Weston-super-Mare in Somerset also appears to be a stronghold of the Wall Brown. Despite extensive searches little in the way of variation has occurred.

Maniola jurtina Linn. (Meadow Brown)

There is little to say about this butterfly except that it is common nearly every year, and can be found on almost any suitable piece of ground. Those specimens with white blotches known as "bleaches" are met with in most seasons, but are not nearly so frequent as in South-East England. It might be of interest to note that the butterfly usually appears on the wing in mid-June and may be seen up to the end of October, if mild weather prevails.

Maniola tithonus Linn. (Hedge Brown)

This species, too, is found all over the two vice-counties but is not usually observed in very large numbers owing to its comparatively short season on the wing. However, this is quite deceiving since if one approaches a suitable haunt at the right time when the weather is good, the species may often be found to be plentiful. We have much evidence of this each year from various localities and so this conclusion is well founded. 1968 was an outstanding year for the Hedge Brown in the Bristol district, particularly in the City itself, where it 'swarmed' at Kingsweston Down. It may safely be said that nearly fifty per cent were of the form ab. *multiocellata* Oberthur, some being quite extreme. Examples of "bleaches" or ab. *transformis* were also taken. Our latest record is of one butterfly at Yatton in North Somerset on 12th September 1965.

Eumenis semele Linn. (Grayling)

Here we have a species which is renowned for its characteristic of inhabiting two quite different haunts. On the one hand it normally flourishes on limestone hills, whereas on the other it can be found in low-lying heathland areas. Although we have no records from West Gloucestershire, the above statement can be applied to North Somerset. In the Mendip Hills, which are primarily limestone, the Grayling butterfly has been noted in no less than five localities. On the rocky outcrops and open areas in Goblin and Brockley Combes it can also be found. In contrast, it is especially common along the coastal reaches either side of Weston-super-Mare, from Sand Point to Brean Down. Unfortunately, the author has not yet had an opportunity to compare specimens from both regions. It is of interest to note that we have no observations from the extensive marshy lowlands and moors south of the Mendip Hills, although one would assume this to be an ideal location.

Melanargia galathea Linn. (Marbled White)

This species, fortunately, does not appear to be in any danger, as indicated from the records. Although it is dying out in some of its former localities, we receive reports of new discoveries every year. In many of its Cotswold haunts, it is the most common of the Satyridae butterflies, and frequently 'clouds' of them have been observed. Whether this is an indication that the Marbled White is on the increase is difficult to assess, but there is certainly no evidence that it is on the decline. It is not only plentiful on the limestone hillsides but also in many of the country lanes and rough fields, extending between Gloucester and Bristol. At Kingsweston Down in northern Bristol, which incidentally is a Roman encampment surrounded by an abundance of various grasses interspersed with hawthorn trees, the Marbled White is common each year.

In 1967, a superb aberration was taken here, in which the normal black markings were replaced by those of a pinkish-buff colour.

In North Somerset, it occurs in nearly every type of habitat, ranging from the bleak open areas in the Mendip Hills, through to the coastal regions near Weston-super-Mare, including the inevitable Goblin Combe, and down across the Somerset lowlands south to the Polden Hills near Street. 1970 appears to be a peak year for the Marbled White, in Goblin Combe at any rate, where numbers of the butterfly were fighting for nectar on each flower head. A male specimen with normal forewings and near-transparent hindwings was caught at this time.

Aphantopus hyperantus L. (Ringlet)

As can be seen from the map, this species is quite widely distributed throughout the two vice-counties, and can be found in a variety of different habitats. It occurs in small numbers on the slopes of Stinchcombe Hill near Dursley in Gloucestershire, which is typical Cotswold limestone scenery containing rough open pastures interspersed with dense scrub. In other areas, such as Wetmoor near Wickwar and Michael Wood, not far from Stone, the Ringlet can be seen in far greater numbers, where there is thick deciduous forest with overgrown rides. Unfortunately, in the latter locality, numbers have been drastically reduced owing to extensive clearing and widespread damage from the development of the M5 motorway.

In North Somerset, the picture is in complete contrast. The butterfly occurs all over the Mendip Hills wherever there is sufficient scrub or woodland, and particularly in the deserted lead-mine areas around Charterhouse and Priddy. In the marshy peat lowlands south of the Mendips, the Ringlet is widely scattered and often very common. However, nearer Bristol, a colony exists in what might be termed a 'unique' locality. This is Goblin Combe, a deep ravine in the limestone uplands not far from Bristol's Lulsgate Airport. More will be said about this spot when describing other species. In Goblin Combe, the Ringlet is perhaps more abundant than in any of the surrounding areas. As can be expected, there is considerable variation with such numbers, and abs. *parvipuncta* and *caeca* are occasionally met with. These two forms are being bred experimentally in the hope of increasing the strength of their populations. Ab. *magnipuncta*, a much rarer variation, has also been found here, and in July of this year (1970) a superb asymmetrical "bleach" was captured.

Coenonympha pamphilus Linn. (Small Heath)

Over the past eight years, the numbers of this little butterfly have increased noticeably, especially in the Bristol district, and reached a peak in 1969. In the early 1960's, only two or three specimens would ever be seen on a particular day,

generally being more plentiful in the first generation.

Starting with West Gloucestershire, including Bristol, the Small Heath was quite scarce on Filton Golf Course but in 1965 there was a marked increase in its strength. In other places such as Wetmoor, Tockington, and Kingsweston Down, the situation has been exactly the same, the last named colony being quite variable owing to its growing status. In more recent times many new colonies have been discovered in the Cotswold Hills, with equally encouraging results. During 1970, we received a bulk of reports from the somewhat built-up areas east of Bristol, such as Purdown, where no fewer than fifty specimens were counted on a day in August.

In North Somerset we have further evidence that this species is on the increase, especially from 1965 onwards. Observations come from a number of localities in each type of habitat, ranging from the Mendip Hills westwards to the extensive sand dunes along the Somerset coastline, and south across the moors and lowlands to the Polden Hills. It appears to be the most common each year at the coast, but a reason cannot be given for this.

NYMPHALIDAE

Euphydryas aurinia Rott. (Marsh Fritillary)

This butterfly, whose numbers appear to be declining elsewhere in Britain, still maintains two strong colonies in the Bristol area. At present, only one remaining locality is known to the author in Gloucestershire, but at one time the Marsh Fritillary was widespread along the Monmouthshire border near the River Wye. Recent flooding is believed to be responsible for the extermination of at least one of these colonies near Tintern. As for the still surviving colony, it appears in strength about every four years at its haunt at Wetmoor, an extensive region of deciduous forest and marshy clearings, located between Wickwar and Hawkesbury Upton. Mild damp winters, typical of the West of England, seem to be detrimental to the hibernating larvae, and this could be the cause of the continual fluctuation in numbers from one year to the next. There is very little in the way of variation within this colony, although quite dark specimens appear from time to time.

The situation in Somerset is a little more encouraging, as can be seen on the map. This species occurs in two of the areas up in the Mendip Hills, where there are ancient lead mine workings, but has not been observed from one of them in more recent years. There are several possibilities which could account for this sudden absence. Due to the altitude and lengthy cold bitter winters in these hills, it is unlikely that the climate can be blamed for this, as opposed to the colony in Gloucestershire. There are two picturesque lakes which are popular with sight-seers, but owing to the rough

terrain it is not very probable that the suitable breeding spots get trampled over. Nearby, much of the heathland has been taken over by the Forestry Commission, but here again the most likely areas have been untouched. The final factor, and the one which I believe to be the prime cause, is the widespread destruction by fire. The remaining flourishing colony near Charterhouse was nearly wiped out by fire a few years ago, but managed to be saved. This colony has long been known to local entomologists and possesses certain unique characteristics. Lastly, there are several sparse colonies down on the Somerset moors, but their survival is threatened by peat cutting.

Argynnis selene Schiff. (Small Pearl-Bordered Fritillary)

At the present time it is difficult to estimate the range and strength of this butterfly in Gloucestershire for various reasons. Until recently a flourishing colony thrived in Michael Wood near Stone, as shown on the map, but its chief breeding ground was completely devastated last year when the M5 motorway development scheme ploughed straight through the woodland. Small patches of Michael Wood are still remaining, in particular those areas owned by the Forestry Commission, where the butterfly may still be surviving, but it is too soon to give any idea of the long-term effects of this ruthless destruction. The Small Pearl-bordered Fritillary has been discovered in considerable strength at two localities in the Forest of Dean, but it is highly probable that many others exist owing to the superb and unharmed natural conditions. This region may easily have the potential that the New Forest once had. There is little threat from tourists, since they usually confine their activities to the picnic areas and nature trails; the greatest problem is undoubtedly the steady onslaught and the notorious hardwood-conifer conversions by the Forestry Commission. Let us learn our lesson from the case of the New Forest and prevent a similar catastrophe from ruining this last of the great forests.

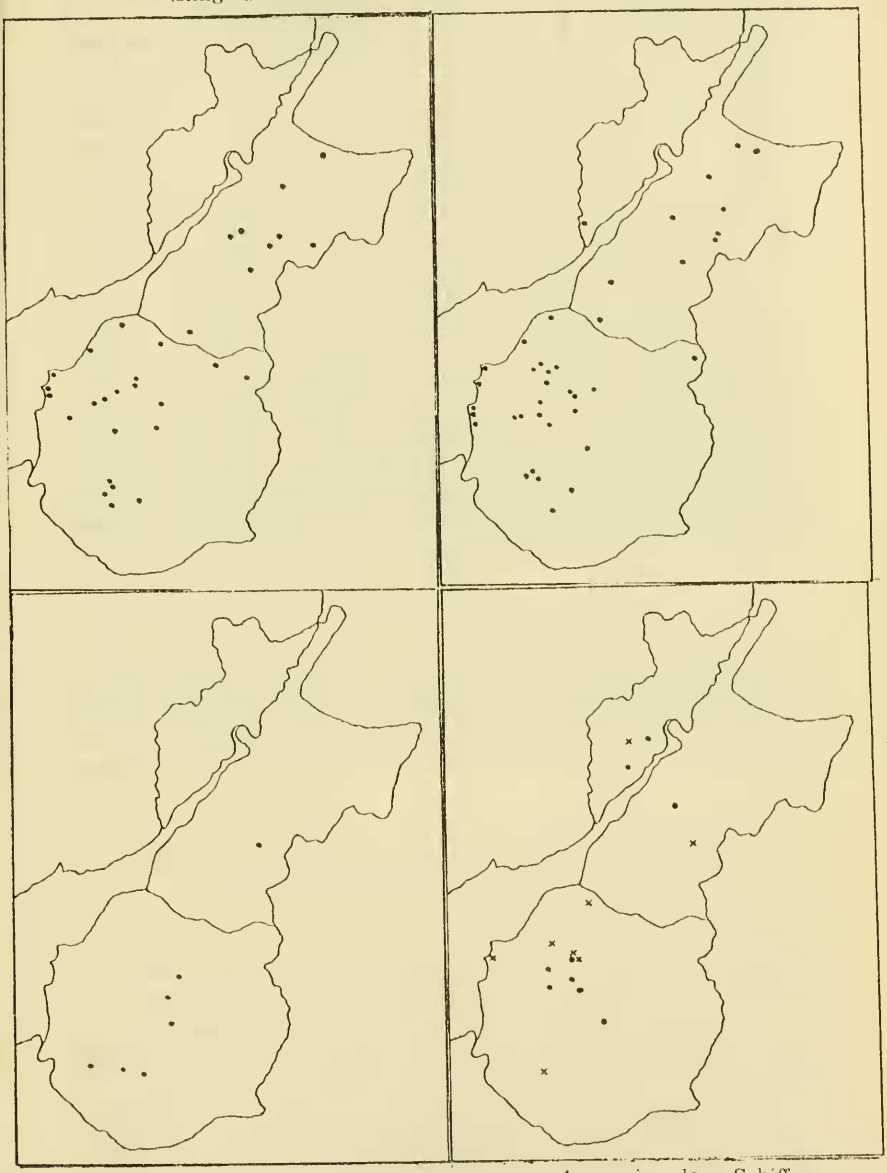
In Somerset, the butterfly is usually met with in the same haunts as the Marsh Fritillary (*Euphydryas aurinia* Rott.), such as the old lead mines in the Mendip Hills and on the marshy lowlands, but is never common. Goblin Combe, mentioned earlier, is an ideal locality for this species, and it is observed there in abundance every year.

Argynnis euphrosyne Linn. (Pearl-Bordered Fritillary)

This species is far scarcer in the West of England than the one previously described. The apparent widespread distribution in Somerset is rather misleading; sightings of the Pearl-bordered Fritillary were recorded from these localities during the early 1960's by members of the British Naturalists' Society, but only in very small numbers, and there is doubt as to their authenticity. None have been recorded in more recent years,

Aphantopus hyperantus L.
(Ringlet)

Melanargia galathea L.
(Marbled White)



Euphydryas aurinia Rott.
(Marsh Fritillary)

Argynnis selene Schiff.
(Small Pearl Bordered Fritillary)
×*Argynnis euphrosyne* L.
(Pearl Bordered Fritillary)

and it is possible that they could have been confused with its cousin, the Small Pearl-bordered Fritillary (*Argynnis selene* Schiff.) which is on the wing at the same time of year and which, itself, occurs in most of these places. However, there is one definite exception, and that is a predominant colony of this butterfly existing alongside its relatives in the area around Goblin Combe. As with *selene*, it is seen here every year, although the first specimens are on the wing about a fortnight earlier. An unusual asymmetrical aberration was taken here in 1966 by the author, where some of the black markings on the forewing (right) are united by an extra black bar, whereas the left-handside of the specimen is completely normal.

At Wetmoor in Gloucestershire, which incidentally is now a nature reserve under the management of the Gloucestershire Trust for Nature Conservation, the butterfly is only occasionally met with and is frequently absent during some years. Across the River Severn in the Forest of Dean, the future prospects for the Pearl-bordered Fritillary look most promising. This year, the butterfly was observed in profusion along some of the old deserted railway cuttings between Lydney and Coleford, and I have received several reports regarding discoveries of other colonies in this region.

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in the above order of preference, having regard to the suitability of the candidates and of the plan of work proposed.

It is envisaged that awards would be made to assist travelling, and other expenses necessary for field work. In total they are not likely to exceed about £100 in 1971 or 1972.

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